

EXPANDED POROUS THERMOPLASTIC POLYMER MEMBRANES AND METHOD FOR THE PRODUCTION THEREOF

This is a divisional of Application Serial No. 09/642,390 filed August 18, 2000, which is a continuation of PCT/EP 99/00286 filed January 19, 1999.

BACKGROUND OF THE INVENTION

Foamed porous membranes are usable for the filtration of fluids in the micro- and macrofiltration range, in particular for prefiltration and final filtration of liquid media in industry, in the laboratory, and in the environmental protection sector.

As described in WO 97/06935, predominantly closed-cell polymer foams with cell sizes of less than $0.1 \mu\text{m}$ and cell densities of at least 1.56×10^{14} cells/cm³ (supermicrocellular polymer foams), and with cell sizes of less than $100 \mu\text{m}$ and cell densities of more than 10^8 cells/cm³ (microcellular polymer foams), can be manufactured by extrusion. The method is characterized by the steps of (a) forming a single-phase polymer/gas solution under pressure, (b) forming the nuclei for gas cells (cell nucleation) by pressure reduction, and (c) effecting cell growth. It is said to be essential to use a gear pump as a throttle valve between the extruder outlet and the nozzle, by which pressure reduction is controlled.

According to WO 92/17533, closed cell foamed films are produced from a foamable polymer and a supercritical fluid. Cell sizes of less than $1 \mu\text{m}$ and cell densities between 10^9 and 10^{15} cells/cm³ are stated to be achieved. According to this very complex method, the film is produced by way of an extruder with a slit nozzle, a supercritical fluid such as CO₂ is introduced at room temperature to a pressure chamber through which the film is guided via rollers, nucleation takes place upon passage into a second chamber at standard pressure, and cell growth is achieved in the second chamber at a



09 MAR 2004

UNITED STATES PATENT AND TRADEMARK OFFICE



COPY

COMMISSIONER FOR PATENT
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. Box 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

Dennis E. Stenzel
1600 ODS Tower
601 S.W. Second Avenue
Portland, Oregon 97204-3157

In re Application of : DECISION ON
KLOTZER :
Application No.: 09/642,390 : PETITION
Filing Date: August 18, 2000 :
Attorney's Docket No.: DES:3568.055 : UNDER 37 CFR 1.182
For: EXPANDED POROUS THERMOPLASTIC :
POLYMER MEMBRANES AND DEVICE FOR : AND 1.137(b)
THE PRODUCTION THEREOF :
:

This is in response to the petition under 37 CFR 1.182 and 1.137(b), filed January 20, 2004, to revive the international application PCT/EP99/00286.

BACKGROUND

On 19 January 1999, applicant filed international application PCT/EP99/00286, which claimed priority of an earlier German application filed 29 January 1998. A copy of the international application was communicated to the United States Patent and Trademark Office from the International Bureau on 05 August 1999. A Demand for international preliminary examination, in which the United States was elected, was filed prior to the expiration of nineteen months from the priority date. Accordingly, the thirty-month period for paying the basic national fee in the United States expired at midnight on 29 July 2000.

On 18 August 2000, applicant filed an application under 35 U.S.C. 111(a). the application was assigned U.S. application number 09/642,390. On 11 June 2001, the first sentence of the description was amend to read as follows: "Pursuant to 35 USC §§ 365(b) and 119, the priority of PCT/EP99/00286 filed 19 January 1999 and German application DE 198 03 362.1 filed 29 January 1998 is claimed."

On 22 January 2002, applicant filed divisional application 10/058,443. A preliminary amendment was filed on the same date amending the first line of the specification as follows:

"This is a divisional of Application Serial No. 09/642,390 filed August 18, 2000. The priority of PCT/EP99/00286 filed January 19, 1999 and DE 198 03 362.1 filed January 29, 1998 is claimed pursuant to USC 35 §§120 and 365(b), respectively."

On 22 September 2003, applicant filed a petition under 37 CFR 1.137(b) to revive PCT application PCT/EP99/00286.

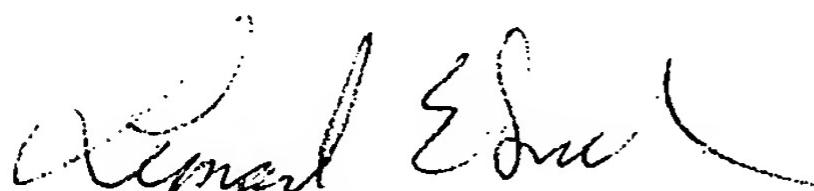
On 22 December 2003, the petition was dismissed in a decision requiring the filing of (1) a petition and \$130.00 petition fee under 35 U.S.C. 182 in application 09/642,390 to amend the first sentence to state "This application is a continuation of PCT/EP99/00286 filed January 19, 1999" and (2) a petition and petition fee of \$1330.00 in 10/058,443 under 37 CFR 1.78(a)(3) and amend the specification as follows: "This application is a divisional of Application Serial No. 09/642,390 filed August 18, 2000, which is a continuation of PCT/EP99/00286 filed January 19, 1999."

DISCUSSION

Applicant's petition under 37 CFR 1.182 to amend the first sentence of US application 09/642,390 to state "This application is a continuation of PCT/EP99/00286 filed January 19, 1999" satisfies the requirement for a proper response to revive the international application. The filing of the continuing application 09/642,390 on 18 August 2000 under 35 U.S.C. 111(a) is accepted as the appropriate response under 37 CFR 1.137(b) (See MPEP § 711.03(c)). International application PCT/EP99/00286 is being revived for purposes of continuity only and since continuity has been established by this decision reviving the international application, the international application is again abandoned in favor of continuing application number 09/642,390.

CONCLUSION

The petition under 37 CFR 1.137(b) to revive international application PCT/EP99/00286 is GRANTED.



Leonard E. Smith
PCT Legal Examiner
PCT Legal Affairs
Office of Patent Cooperation Treaty
Legal Administration

Telephone: (703) 308-6461
Facsimile: (703) 308-6459